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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,017	03/16/2004	Alan S. Bitzer	C-2812	2810
7590	03/06/2006			
M.P. Williams 210 Main Street Manchester, CT 06040			EXAMINER WALKER, KEITH D	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,017

Applicant(s)

BITZER ET AL.

Examiner

Keith Walker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Remarks

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/19/05 has been entered.

Claims 2 & 3 are pending in the application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 2 & 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are drawn to a product and have methods of operating or using the product, "incrementally increases and decreases the flow of reactant gas at said primary inlet in response to..." mixed in with the product claim. It is held that a single claim, which claims both an apparatus and the method steps of using the apparatus, is indefinite (MPEP 2173.05).

Claims Interpretation

Regarding Claims 2 & 3, the pressure regulator which "incrementally increases and decreases the flow of reactant gas at said primary inlet in response to..." is

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considered to be intended use and a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations (*MPEP* 2113). So while the limitation has been considered it is not given patentable weight.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2 & 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication 2003/0022034 (Suzuki) in view of US Publication 2002/0136942 (Kashiwagi).

Suzuki teaches a fuel cell system containing a hydrogen supply, a variable regulator feeding a primary inlet to an ejector, which feeds the fuel cell and an exhaust line feeding the secondary ejector inlet. A controller controls the variable valve in response to pressure sensors before the fuel cell (Fig. 2, [0043-0048], [0053-0055]).

Suzuki does not teach the use of a blower in the fuel cell effluent line or a pressure sensor after the fuel cell.

The pressure sensor is used to detect the pressure difference created when more power is required of the fuel cell and the reactants are used faster than supplied. This vacuum will be present in the fuel line both before and after the fuel cell. So while Suzuki teaches the pressure sensor placed before the fuel cell, rearranging the sensor

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to locate it after the fuel cell is just a rearrangement of parts. It would have been obvious to one having ordinary skill in the art at the time the invention was made to place the sensor after the fuel cell, since it has been held that rearranging parts of an invention involves only routine skill in the art (*In re Japikse*, 86 USPQ 70).

Kashiwagi teaches a fuel cell stack system fed by a hydrogen supply through a pressure control valve and an ejector. The ejector has two inlets for receiving pure fuel and effluent from the stack and an outlet for supplying the fuel cell stack. Anode effluent from the fuel cell stack is routed through a pump back to the ejector (Fig. 1, Abstract, [0018-0022]). The motivation to use a blower in the effluent line supplying the ejector is to improve the efficiency of the ejector and the supply system. When the flow rate is low, the ejector is not able to efficiently exert force on the effluent gas in the recirculation line. So the addition of the pump allows the supply of the recirculation gas to the ejector ([0004-0005]).

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the fuel cell system of Suzuki with the blower of Kashiwagi to improve the ejector's efficiency in low operating pressures.

Response to Arguments

3. Applicant's arguments with respect to claims 2 & 3 have been considered but due to amendments are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Walker whose telephone number is 571-272-3458. The examiner can normally be reached on Mon. - Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KW


PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER